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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/549,997

12/16/2005

Steffen Greiner

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EXAMINER

PAGE, BRENT T

ART UNIT

PAPER NUMBER

1638

MAIL DATE

DELIVERY MODE

10/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/549,997	Applicant(s) GREINER ET AL.	
	Examiner Brent Page	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-31 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-9, 14-15, and 17-23 drawn to a first method for producing a transgenic sugar beet and a transgenic plant from said method and harvesting or propagation material from said plant, wherein the operatively linked promoter in the transformation vector is the CaMV35S promoter and the first and second transgenes are on a single vector.

Group II, claim(s) 1-9, 14, 16, and 17-23 drawn to a second method for producing a transgenic sugar beet and a transgenic plant from said method and harvesting or propagation material from said plant, wherein the operatively linked promoter in the transformation vector is the CaMV35S promoter and the first and second transgenes are on different vectors.

Group III, claim(s) 1-8, 10-11, 13-15, and 17-23, drawn to a third method for producing a transgenic sugar beet and a transgenic plant from said method and harvesting or propagation material from said plant, wherein the operatively linked promoter in the transformation vector is a Beta vulgaris V-Ppase promoter and the first and second transgenes are on a single vector.

Group IV, claim(s) 1-8, 10-11, 13-14, 16 and 17-23, drawn to a fourth method for producing a transgenic sugar beet and a transgenic plant from said method and harvesting or propagation material from said plant, wherein the operatively linked promoter in the transformation vector is a Beta vulgaris V-Ppase promoter and the first and second transgenes are on different vectors.

Group V, claim(s) 1-8, 12-15, and 17-23, drawn to a fifth method for producing a transgenic sugar beet and a transgenic plant from said method and harvesting or propagation material from said plant, wherein the operatively linked promoter in the

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transformation vector is a sucrose synthase promoter and the first and second transgenes are on the same vector.

Group VI, claim(s) 1-8, 12-14, 16, and 17-23, drawn to a sixth method for producing a transgenic sugar beet and a transgenic plant from said method and harvesting or propagation material from said plant, wherein the operatively linked promoter in the transformation vector is a sucrose synthase promoter and the first and second transgenes are on different vectors.

Group VII, claim(s) 24, and 26-31 drawn to a seventh method, said method for producing a transgenic plant, and a nucleic acid encoding a protein having the biological activity of a *Beta vulgaris* soluble pyrophosphatase and a vector comprising said nucleic acid.

Group VIII, claim(s) 25, drawn to a nucleic acid molecule that is a *Beta vulgaris* vacuolar pyrophosphatase.

The inventions are independent or distinct, each from the other because:

The inventions listed as Groups I-VIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The claims are related by the technical feature of *beta vulgaris* vacuolar pyrophosphatase sequences. However, this feature is not special since it does not constitute and advance over the prior art. Kim et al (Plant Physiology 1994 106:375-382) reported the isolation and characterization of cDNAs encoding *beta vulgaris* vacuolar pyrophosphatases. Therefore, the restriction requirement is proper under these guidelines.

Additionally, each of the Groups require features not required by any other group. For instance, Group I requires the first and second transgenes on the same vector, not required by Group II and also requires the CaMV 35S promoter not required by Groups III-VIII. Group II requires the first and second transgenes to be on different vectors, and therefore requires method steps and vector materials not required by Group I and also

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requires the CaMV 35S promoter not required by Groups III-VIII. Groups III-VII are all different methods, each of which require method steps not required by the other. Group III requires the beta vulgaris V-Ppase promoter and requires a single vector for the first two transgenes, Group IV requires the beta vulgaris V-Ppase promoter and requires two different vectors for the first two transgenes, Group V requires a sucrose synthase promoter and requires a single vector for the first two transgenes, Group VI requires a sucrose synthase promoter and requires two different vectors for the first two transgenes, Group VII requires method steps that do not require more than one transgene but do require nucleic acids not required by other groups, and Group VIII requires an isolated nucleic acid promoter which can be used in processes other than those of the other groups and is not required by Groups I-II or V-VII.

In addition the restriction requirement above, Applicants are required to select a single SEQ ID NO: depending on which invention is elected, but may choose no more than ONE SEQ ID NO: for each transgene and each promoter. Applicant must select either SEQ ID NO: 4 OR SEQ ID NO: 5 for the first transgene, SEQ ID NO:1 OR SEQ ID NO: 2 for the second transgene, and/or SEQ ID NO: 6 OR SEQ ID NO: 7 for the promoter sequence.

Applicants are reminded that nucleotide sequences encoding different proteins are structurally distinct chemical compounds and are unrelated to one another. These sequences are thus deemed to normally constitute independent and distinct inventions within the meaning of 35 U.S.C. 121. Absent evidence to the contrary, each such

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nucleotide sequence is presumed to represent an independent and distinct invention, subject to a restriction requirement pursuant to 35 U.S.C. 121 and 37 CFR 1.141 et seq.

This requirement is not to be construed as a requirement for an election of species, since each nucleotide and amino acid sequence is not a member of single genus of invention, but constitutes an independent and patentably distinct invention.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

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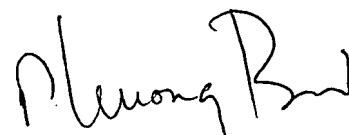
remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent Page whose telephone number is (571)-272-5914. The examiner can normally be reached on Monday-Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571)-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brent T Page



PHUONG T. BUI
PRIMARY EXAMINER